CLAIMS:

1. Arrangement on a semiconductor chip for calibrating a temperature setting curve having

- a signal generation unit (2) for providing a first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}), which is proportional to the actual temperature T_1 of the chip, whereby a signal offset (I_{virt}, V_{virt}, f_{virt}) is creatable by the signal generation unit (2), which is combined with the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) defining a second signal (I_{ptat2}, V_{ptat2}, f_{ptat2});
- a signal extraction unit (3) receiving the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) and the second signal (I_{ptat2}, V_{ptat2}, f_{ptat2}) for calculating a first temperature point (T_1) based on the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) and a second temperature point (T_2) based on the second signal (I_{ptat2}, V_{ptat2}, f_{ptat2}).

2. Arrangement as claimed in claim 1, whereby the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}), which is proportional to the actual temperature (T_1) of the chip, is a current (I_{ptat1}), a voltage (V_{ptat1}) or a frequency (f_{ptat1}).

3. Arrangement as claimed in claim 1, whereby the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) and the second signal (I_{ptat2}, V_{ptat2}, f_{ptat2}) are convertible into digital signals, whereby the temperature extraction unit (3) calculates the first and second temperature points (T_1, T_2) for calibrating the temperature setting curve.

4. Method for calibrating a temperature setting curve of a temperature sensor arrangement on a semiconductor chip, the method comprising:

- reading a first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}), which is proportional to the actual temperature (T_1) of the chip

- generating a signal offset (I_{virt}, V_{virt}, f_{virt}), which is combined with the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) defining a second signal (I_{ptat2}, V_{ptat2}, f_{ptat2})
- extracting a first actual temperature T_1 from the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) and a second temperature (T_2) from the second signal (I_{ptat2}, V_{ptat2}, f_{ptat2})

5. Method as claimed in claim 4, whereby the resulting temperatures (T_1, T_2) are used for providing calibration parameters to the chip.

6. Method as claimed in claim 5, whereby calculating calibration parameters can be performed on-chip or off-chip.

7. Method as claimed in claim 4, whereby additional signal offsets (I_{virt2}, V_{virt2}, f_{virt2}) are provided for calculating more than two temperature points (T_n) and calibrating a non linear temperature setting curve.

8. Method as claimed in claim 4, whereby the signal offset (I_{virt}, V_{virt}, f_{virt}) is subtracted from first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) or added to the first signal (I_{ptat1}, V_{ptat1}, f_{ptat1}) defining the second signal (I_{ptat2}, V_{ptat2}, f_{ptat2}), which is provided to the temperature extraction unit (3).